Amendments to the Claims:

Claims pending

- At time of the Action: Claims 26-71.
- After this Response: Claims 26-27, 30-35, 37-38, 41-44, 47-49, 51-52, 55-57, 60-65, 67-68, and 71

Canceled or Withdrawn claims: Claims 28, 29, 36, 39, 40, 45, 46, 50, 53, 54, 58, 59, 66, 69, and 70

Amended claims: Claims 26, 35, 38, 43, 49, 52, 65, and 68

New claims: None

Claims 1-25 (Canceled).

26. (Currently amended) A process for managing temperature in a printer, comprising:

preprocessing a file into a plurality of swaths;

preprocessing each of the swaths into a plurality of cells;

calculating an estimated peak temperature for each printhead in printing each of the plurality of cells, the calculating including:

estimating a number of ink drops required for a printhead in printing a cell;

determining a quotient of the ink drop estimate over a constant;

adding the quotient to an initial temperature for the printhead in the cell; and

printing the swath in response to the estimated peak temperature for each printhead in printing, each of the cells being below a predetermined maximum temperature.

27. (Previously presented) The process of claim 26, further comprising:

measuring the temperature of each printhead prior to printing the swath; and

employing the measured temperature as an initial temperature in calculating the estimated peak temperature for each printhead in printing a first cell of the swath.

28. (Cancelled)

29. (Cancelled)

30. (Previously presented) The process of claim 26, further comprising:

dividing a pass of each printhead in printing the swath into a number of sub-passes in response to the estimated peak temperature for any printhead in printing any of the cells being greater than the predetermined maximum temperature; and

wherein a number of ink drops printed during each sub-pass is substantially less than a number of ink drops printed during a pass.

31. (Previously presented) The process of claim 30, further comprising calculating the number of sub-passes by determining the number of sub-passes required to maintain a predicted temperature of each printhead below the predetermined maximum temperature.

32. (Previously presented) The process of claim 30, wherein dividing a pass further comprises printing the sub-passes in a height that is substantially similar to the printing pass.

33. (Previously presented) The process of claim 30, wherein dividing a pass further comprises:

reducing the number of ink drops printed during each sub-pass; and

performing a sufficient number of sub-passes to cause the ink drops to be printed during a total of each sub-pass to substantially equal a total number of ink drops to be printed during the printing pass.

34. (Previously presented) The process of claim 30, wherein dividing a pass further comprises printing the number of sub-passes, wherein a recording medium is not advanced between each sub-pass of the number of sub-passes.

35. (Currently amended) A system for managing temperature in a printer, comprising:

a memory;

at least one printhead, and

an adaptive thermal print swath servo ("ATPSS") module to preprocess a file stored in the memory into a plurality of swaths, each swath being further preprocessed into a plurality of cells, wherein the ATPSS module is further configured to calculate an estimated peak temperature for each printhead in printing each cell and to print the swath with the printhead in response to the estimated peak temperature for each printhead in printing, each cell being below a predetermined maximum temperature, and wherein calculating estimated peak temperature includes:

estimating a number of ink drops required for a printhead in printing a cell;

determining a quotient of the ink drop estimate over a constant;

adding the quotient to an initial temperature for the printhead in the cell.

36. (Cancelled)

37. (Previously presented) The system of claim 35, further comprising a temperature sensor, wherein the ATPSS module is further configured to measure the temperature of each printhead prior to and after printing each cell in the swath with the temperature sensor.

38. (Currently amended) A computer readable storage medium on which is embedded one or more computer programs, the one or more computer programs implementing a method for managing temperature in a printer, the one or more computer programs comprising a set of instructions for:

preprocessing a printable file into a plurality of swaths, each swath being further preprocessed into a plurality of cells;

calculating an estimated peak temperature of at least one printhead in printing each cell, the calculating including:

estimating a number of ink drops required for a printhead in printing a cell;

determining a quotient of the ink drop estimate over a constant;

adding the quotient to an initial temperature for the printhead in the cell; and

printing the swath in response to the estimated peak temperature, each cell being below a predetermined maximum allowed temperature.

39. (Cancelled)

40. (Cancelled)

41. (Previously presented) The computer readable storage medium of claim 38, the one or more computer programs further comprising a set of instructions for:

dividing a printing pass of each printhead in printing the swath into a number of sub-passes in response to the estimated peak temperature for any printhead in printing any of the cells being greater than the predetermined maximum temperature; and

wherein a number of ink drops printed during each the sub-pass is substantially less than a number of ink drops printed during a pass.

42. (Previously presented) A process for managing temperature in a printer, comprising:

preprocessing a file into a plurality of swaths;

preprocessing a selected swath of the plurality of swaths into a plurality of cells;

calculating an estimated peak temperature for a printhead in printing at least one cell of the plurality of cells, the calculating step comprising:

estimating a number of ink drops required to print the at least one cell of the selected swath;

determining a quotient of the ink drop estimate over a constant;

adding the quotient to an initial temperature of the printhead; and

printing the selected swath in response to the estimated peak temperature for the printhead in printing, the at least one cell being below a predetermined maximum temperature.

43. (Currently amended) A process for managing temperature in a printer, comprising:

preprocessing a file into a plurality of swaths;

preprocessing a selected swath of the plurality of swaths into a plurality of cells;

calculating an estimated peak temperature for a printhead in printing at least one cell of the plurality of cells, the calculating including:

estimating a number of ink drops required for the printhead to print the at least one cell of the selected swath;

determining a quotient of the ink drop estimate over a constant;

adding the quotient to an initial temperature of the printhead in the at least one cell; and

printing the selected swath in response to the estimated peak temperature for the printhead in printing, the at least one cell being below a predetermined maximum temperature.

44. (Previously presented) The process of claim 43, further comprising:

measuring a temperature of the printhead prior to printing the selected swath; and

employing the measured temperature as an initial temperature in calculating the estimated peak temperature for the printhead in printing the at least one cell of the swath.

45. (Cancelled)

46. (Cancelled)

47. (Previously presented) The process of claim 43, further comprising dividing a pass of the printhead in printing the selected swath into a number of sub-passes in response to the estimated peak temperature for the printhead in printing the at least one cell being greater than the predetermined maximum temperature wherein a number of ink drops printed during each the sub-pass is substantially less than a number of ink drops printed during a pass.

48. (Previously presented) The process of claim 47, further comprising calculating the number of sub-passes by determining the number of sub-passes required to maintain a predicted temperature of the printhead below the predetermined maximum temperature.

49. (Currently amended) A system for managing temperature in a printer, comprising:

at least one printhead; and

an adaptive thermal print swath servo ("ATPSS") module to preprocess a file into a plurality of swaths, a selected swath being further preprocessed into a plurality of cells, wherein the ATPSS module is further configured to calculate an estimated peak temperature for the at least one printhead in printing at least

one cell of a selected swath and to print the selected swath with the at least one printhead in response to the estimated peak temperature for the at least one printhead in printing, the at least one cell being below a predetermined maximum temperature, and wherein calculating estimated peak temperature includes:

estimating a number of ink drops required for the at least one printhead in printing a cell;

determining a quotient of the ink drop estimate over a constant;

adding the quotient to an initial temperature for the at least one printhead in the cell.

50. (Cancelled)

51. (Previously presented) The system of claim 49, further comprising a temperature sensor, wherein the ATPSS module is further configured to measure the temperature of the at least one printhead prior to and after printing the at least one cell in the selected swath with the temperature sensor.

52. (Currently amended) A computer readable storage medium on which is embedded one or more computer programs, the one or more computer programs implementing a method for managing temperature in a printer, the one or more computer programs comprising a set of instructions for:

preprocessing a printable file into a plurality of swaths, each swath being further preprocessed into a plurality of cells;

calculating an estimated peak temperature of at least one printhead in printing the at least one cell of a selected swath, the calculating estimated peak temperature including:

estimating a number of ink drops required for the at least one printhead in printing a cell;

determining a quotient of the ink drop estimate over a constant;

adding the quotient to an initial temperature for the at least one printhead in the cell; and

printing the selected swath in response to the estimated peak temperature, the at least one cell being below a predetermined maximum allowed temperature.

53. (Cancelled)

54. (Cancelled)

55. (Previously presented) The computer readable storage medium of claim 53, the one or more computer programs further comprising a set of instructions for:

dividing a printing pass of the at least one printhead in printing the selected swath into a number of sub-passes in response to the estimated peak

temperature for the at least one printhead in printing the at least one cell being greater than the predetermined maximum allowed temperature; and

wherein a number of ink drops printed during each the sub-pass is substantially less than a number of ink drops printed during a pass.

56. (Currently amended) A process for managing temperature in a large format printer, comprising:

preprocessing a file to be printed into a plurality of swaths;

preprocessing each of the swaths into a plurality of cells;

calculating an estimated peak temperature for each printhead of a plurality of printheads in printing each of the plurality of cells, the calculating including:

estimating a number of ink drops required for a printhead to print a cell;

determining a quotient of the ink drop estimate over a constant;

adding the quotient to an initial temperature for the printhead in the cell; and

printing the swath in response to the estimated peak temperature for each printhead of the plurality of printheads in printing, each of the cells being below a predetermined maximum temperature.

57. (Previously presented) The process of claim 56, further comprising:

measuring the temperature of each printhead of the plurality of printheads prior to printing the swath; and

employing the measured temperature as an initial temperature in calculating the estimated peak temperature for each printhead in printing a first cell of the swath.

58. (Cancelled)

59. (Cancelled)

60. (Previously presented) The process of claim 56, further comprising:

dividing a pass of each printhead in printing the swath into a number of sub-passes in response to the estimated peak temperature for any printhead in printing any of the cells being greater than the predetermined maximum temperature; and

wherein a number of ink drops printed during each sub-pass is substantially less than a number of ink drops printed during a pass.

61. (Previously presented) The process of claim 56, further comprising:

dividing a pass of each printhead in printing the swath into a number of sub-passes in response to the estimated peak temperature for any printhead in printing any of the cells being greater than the predetermined maximum temperature; and

wherein a number of ink drops printed during each sub-pass is substantially less than a number of ink drops printed during a pass and further comprising calculating the number of sub-passes by determining the number of sub-passes required to maintain a predicted temperature of each printhead below the predetermined maximum temperature.

62. (Previously presented) The process of claim 56, further comprising:

dividing a pass of each printhead in printing the swath into a number of sub-passes in response to the estimated peak temperature for any printhead in printing any of the cells being greater than the predetermined maximum temperature; and

wherein a number of ink drops printed during each sub-pass is substantially less than a number of ink drops printed during a pass, wherein dividing a pass further comprises printing the sub-passes in a height that is substantially similar to the printing pass.

63. (Previously presented) The process of claim 56, further comprising:

dividing a pass of each printhead in printing the swath into a number of sub-passes in response to the estimated peak temperature for any printhead in printing any of the cells being greater than the predetermined maximum temperature; and

wherein a number of ink drops printed during each sub-pass is substantially less than a number of ink drops printed during a pass, wherein dividing a pass further comprises:

reducing the number of ink drops printed during each sub-pass; and

performing a sufficient number of sub-passes to cause the ink drops to be printed during a total of each sub-pass to substantially equal a total number of ink drops to be printed during the printing pass.

64. (Previously presented) The process of claim 56, further comprising:

dividing a pass of each printhead in printing the swath into a number of sub-passes in response to the estimated peak temperature for any printhead in printing any of the cells being greater than the predetermined maximum temperature; and

wherein a number of ink drops printed during each sub-pass is substantially less than a number of ink drops printed during a pass, wherein dividing a pass further comprises printing the number of sub-passes, wherein a recording medium is not advanced between each sub-pass of the number of sub-passes.

65. (Currently amended) A system for managing temperature in a large format printer, comprising:

a memory;

a plurality of printheads, and

an adaptive thermal print swath servo ("ATPSS") module to preprocess a file stored in the memory into a plurality of swaths, each swath being further preprocessed into a plurality of cells, wherein the ATPSS module is further configured to calculate an estimated peak temperature for at least one printhead of the plurality in printing each cell and to print the swath with the printhead in response to the estimated peak temperature for each printhead in printing, each cell being below a predetermined maximum temperature, and wherein calculating estimated peak temperature includes:

estimating a number of ink drops required for the at least one printhead in printing a cell;

determining a quotient of the ink drop estimate over a constant;

adding the quotient to an initial temperature for the at least one printhead in the cell.

66. (Cancelled)

67. (Previously presented) The system of claim 65, further comprising a temperature sensor, wherein the ATPSS module is further configured to measure the temperature of at least one printhead of the plurality prior to and after printing each cell in the swath with the temperature sensor.

68. (Currently amended) A computer readable storage medium on which is embedded one or more computer programs, the one or more computer

programs implementing a method for managing temperature in a printer, the one or more computer programs comprising a set of instructions for:

preprocessing a printable file into a plurality of swaths, each swath being further preprocessed into a plurality of cells;

calculating an estimated peak temperature of at least one printhead of a plurality of printheads in printing each cell , the calculating including:

estimating a number of ink drops required for the at least one printhead to print a cell;

determining a quotient of the ink drop estimate over a constant;

adding the quotient to an initial temperature for the at least one printhead in the cell; and

printing the swath in response to the estimated peak temperature, each cell being below a predetermined maximum allowed temperature.

69. (Cancelled)

70. (Cancelled)

71. (Previously presented) The computer readable storage medium of claim 68, the one or more computer programs further comprising a set of instructions for:

dividing a printing pass of at least one printhead of the plurality of printheads in printing the swath into a number of sub-passes in response to the

estimated peak temperature for any printhead of the plurality of printheads in printing any of the cells being greater than the predetermined maximum temperature; and

wherein a number of ink drops printed during each the sub-pass is substantially less than a number of ink drops printed during a pass.